

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
FACT SHEET
(Pursuant to NAC 445A.236)

Permittee Name: MK Environmental Ltd., LLC
d/b/a A Honey Wagon, Inc.
7100 Trading Post Lane
Las Vegas, NV 89128

Permit Number: NEV2011509

Location: Apex Industrial Area
Mountain View Industrial Park
11101 U.S. Hwy 93 North
North Las Vegas, Clark County, NV 89124
Township 18S, Range 63E, NE¼ of NE¼ of Section 16
Latitude: 36° 23' 25" N, Longitude: 114° 56' 20" W

General: MK Environmental Ltd., LLC has applied to the Division for the construction and operation of a lined wastewater impoundment facility designed to recycle restaurant grease and vegetable oils. The proposed facility is to be located in the Apex Industrial Area, 20 miles northeast of downtown Las Vegas. The two wastewater impoundments proposed are each ½-acre (surface area) × 6 ft. (max. operating depth), with 2 ft. freeboard, and will be constructed in two phases. Each phase includes one ½-acre impoundment. The impoundments will be double-lined with HDPE or high density polyethylene liners (60-mil primary and 40-mil secondary) and furnished with collection sumps for leak detection sampling. The wastewater discharged into the impoundments will be screened bottom liquids (process wastewater) generated from recycling grease interceptor (grease trap) wastewater and used vegetable oils. Hydrocarbons (i.e., petroleum) will not be handled at this facility. Screening solids will be collected and hauled offsite for landfilling, and the recovered grease will be hauled offsite and sold for applications including cosmetics (glycerol), animal feeds and biodiesel. The impoundment liquids (i.e., water) will be evaporated, and when the ponds are cleaned via suction pumping, the grease will be recovered and recycled. The permit prohibits any wastewater discharge to the environment. For odor control, the facility will be installing an in-line pH adjustment system metering in lime (base) to increase the pH; neutralizing odor-causing materials, and the waste stream then injected with carbon dioxide (acid) to buffer the pH level below that of a strong caustic liquid. Additional odor control is provided via recirculation pumps to run the ponds' evaporative sprinklers to enhance the surface evaporation rate.

Bureau of Corrective Actions Sites: There is no Bureau of Corrective Action (BCA) remediation site located within a one-mile radius of the proposed facility.

Wellhead Protection Area: The proposed facility is not located within a defined drinking water protection area. The nearest supply well, a non-transient, non-community industrial supply well operated for the Chemical Lime Co., is located 1¾ miles east of the proposed kitchen grease recycling facility.

Groundwater Characteristics: The permit prohibits any discharge to the environment

(groundwater). According to the State Engineer, one nearby supply well was installed in Township 18S, Range 63E, Section 16. The static water level was indicated at 578 ft. below ground surface in Section 16. The proposed permit does not require groundwater monitoring based on the high separation depth between surface and groundwater. Liner leakage will be regulated in accordance with design standards published in the Division's WTS-37 guidance document and also in the *Ten State Standards* (500 GPD/acre). Quarterly FOG (Fats, Oil and Grease) sampling is required whenever 25 gallons (or more) is recovered from a leak collection sump.

Flow: The first impoundment (Phase 1) provides 25,000 gallons/week (3,600 GPD) of evaporative storage capacity to maintain a 2 ft. freeboard year-round. This capacity is increased to 45,000 gallons/week (6,400 GPD) when the second impoundment (Phase 2) is constructed. An in-line flow meter is required to measure flow. The Division requires a minimum annual calibration certification of this meter and other instrumentation (e.g., pH, D.O.) to maintain reliable reporting accuracy.

Wastewater Analysis: The applicant provided two samples of screened, limed bottom liquids considered representative of the proposed wastewater stream. The numerical average of these two samples indicated: Oil and Grease, 43 mg/l; Suspended Solids, Non-Detect Level; and BOD₅, 4,000 mg/l. At the indicated pH level (12.5 SU); prior to carbon dioxide buffering, the applicant indicated there was no indication of a grease trap odor.

Rational for Permit Requirements: The limits in Table 1 are proposed by the Division for this wastewater impoundment facility.

Flow: The limits in the two construction phases are based on an evaporative water balance to maintain a minimum 2 ft. freeboard in each ½-acre impoundment.

pH: The facility is to maintain the proposed pH level and avoid a strong caustic level (i.e., pH ≥ 12.5 Standard Units) in the ponds. Acid buffering is obtained by carbon dioxide (carbonic acid) injection.

D.O.: The Division's WTS-6 pond guidance indicates the maintenance of a minimum 2.0 mg/l dissolved oxygen level in wastewater ponds to prevent anaerobic conditions. Each impoundment shall be field tested monthly (min. of 4 sampling points) using a D.O. meter and checked against this standard.

Freeboard: A 2 ft. freeboard is in accordance with WTS-37 specifications for small wastewater impoundments (< 1 acre) to prevent overtopping.

Operating Depth: Monitor and Report (M&R). The impoundments are designed to store up to 6 ft. of liquid, each.

Leak Accumulation: Each pond's sump shall be inspected and pumped dry quarterly to measure the accumulation rate of any seepage collected by the French drains. The Division has adopted the published leakage rate in the *Ten State Standards* (500 GPD/acre), which equates to 250 GPD for a ½-acre impoundment. If ≥ 250 gallons of fluids are collected from any sump during an inspection event, the facility shall submit within one month's time a liner inspection and repair plan for the Division's review.

FOG: To determine occurrence of any FOG leakage through the liner, a quarterly sample is required upon collection of ≥ 25 gallons from any one sump. The 25 gallon threshold is applied to discount negligible amounts of sump fluids normally occurring from simple moisture condensation underneath the primary liner material.

TPH: The permit prohibits the handling (recycling) of any used petroleum oil in the wastewater impoundments. The pond inflow shall be sampled annually for TPH (Total Petroleum Hydrocarbons) and limited to the Division's 1.0 mg/l standard for an effluent considered free of petroleum contaminants.

TABLE 1: DISCHARGE LIMITATIONS

PARAMETERS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	30-Day Average	Daily Maximum	Sample Location	Measurement Frequency	Sample Type
Flow (Phase 1 – 1 st Pond), GPD (Gallons per Day)	3,600	-	Discharge Line	Continuous	Flow Meter
Flow (Phase 2 – 2 nd Pond), GPD (Gallons per Day)	6,400	-	Discharge Line	Continuous	Flow Meter
pH, Standard Units (S.U.)	6.0 to 11.0		Discharge Line	Monthly	In-line pH Meter
Dissolved Oxygen Level (D.O.), mg/l	≥ 2.0		Each Pond (Ave. of min. 4 sampling points)	Monthly	Field Measurement (D.O. Meter)
Pond Freeboard, ft.	≥ 2.0		Each Pond	Monthly	Staff Gage or Level Sensor
Operating Depth, ft.	M&R		Each Pond	Monthly	Staff Gage or Level Sensor
Leakage Collection Sump Fluid Accumulation, gallons/sampling event	≤ 250		Each Sump	Quarterly	Field Measurement
Fats, Oil & Grease (FOG), mg/l	Sampling required when ≥ 25 gallons of liquid recovered from any sump.		Each Sump	Quarterly	Discrete (Certified Lab Analysis)
Total Petroleum Hydrocarbons (TPH), Purge & Extract (8015B), mg/l	≤ 1.0		Discharge Line	Annually (4 th Quarter)	Discrete (Certified Lab Analysis)

Schedule of Compliance: (all compliance deliverables shall be addressed to the attention of the Compliance Coordinator, Bureau of Water Pollution Control):

- The Permittee shall achieve compliance with the permit limitations upon issuance of the permit.

- The Permittee shall notify the Division in writing not more than fourteen (14) calendar days following the completion and startup of Phases #1 and #2, individually.
- Within fourteen (14) calendar days prior to the startup of Phase #1, the Permittee shall submit a copy of an Odor Control & Mitigation Plan for the facility. The Odor Control & Mitigation Plan shall be prepared under the supervision and signed/wet-stamped by a registered Nevada engineer (P.E.).
- Within thirty (30) days after construction completion of Phases #1 and #2, individually, the Permittee shall submit copies of the engineer's Construction Quality Assurance (CQA) letters that the evaporation storage ponds were constructed in accordance with plans and specifications furnished to the Division. The CQA letters shall be wet stamped and signed by a Nevada Professional Engineer (P.E.).
- Within forty five (45) days after the startup of Phase #1, the Permittee shall submit a copy of an Operations & Maintenance (O&M) Manual for the facility covering Phases #1-2, prepared in accordance with NDEP Water Technical Sheet No. WTS-2: *Minimum Information Required for an Operation and Maintenance Manual*. The O&M Manual is required to include a Best Management Practices (BMP) section on good housekeeping procedures for the timely inspection and cleanup of any leakage or spills occurring within the facility. The O&M Manual shall be prepared under the supervision and signed/wet-stamped by a registered Nevada engineer (P.E.).

Procedures for Public Comment: The Notice of the Division's intent to issue discharge permit NEV2011509, subject to the conditions contained within the permit is being sent to the **Las Vegas Review-Journal** newspaper for publication. The notice is also being electronically mailed to all interested persons requesting listing on our public notification mailing list. Anyone wishing to comment on the proposed permit can do so in writing within a period of thirty (30) calendar days of the date of publication of the public notice in the newspapers. The comment period can be extended at the discretion of the Administrator. The deadline date and time by which all comments are to be submitted (via postmarked mail or time-stamped faxes, e-mails, or hand-delivered items) to the Division is **Tuesday, September 20, 2011, by 5:00 P.M. PST.**

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator or any interested agency, person or group of persons.

The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Proposed Determination: The Division has made the tentative determination to issue permit NEV2011509 for a five-year permit term.

Prepared by: Cliff Lawson, P.E., Supervisor
Permits Branch
Bureau of Water Pollution Control
Nevada Division of Environmental Protection

Date: August 16, 2011